



Dart Aerospace Ltd.
1270 Aberdeen St
Hawkesbury, ON
K6A 1K7
Canada

Tel (613) 632-5200

RBW6205G26631-3G-1
Job Sheet 171437



Part No: RBW6205G26631-3G-1

Job Qty: 3 ea

Part Name: Wrench



Part Weight: 0 lbs

Status: Scheduled

Priority: Medium

Job Created: 2/1/18

Job Tracking No:

Due Date: 2/12/18

Created By: Marie Lajeunesse

Type: Stock

Description:

Note: DWG RBW6205G26631-3G Rev 2 IPP Rev A 18.01.11 New issue DP Verify DD

Ship Via:

Bill of Materials

Job Routing

Op No	Operation	Qty	Start Date	Due Date	Standard		Workcenter/Supplier		Sign-off
					Setup hrs	Run Hrs	Workcenter / Supplier	Lead Time	
90	Start up Operation	3 Ea		2/10/18	0.00	0.00	Start Up Machining-3		3C-1
110	Bandsaw	3 pcs		2/10/18	0.00	0.15	Bandsaw1		3C-1
120	Mori Seiki	3 pcs		2/12/18	0.00	3.00	MORI NV5000-2		3C-1
130	QC	3 pcs		2/12/18	0.00	0.00	QC2 Machining-4		3C-1
140	QC	3 pcs		2/12/18	0.00	0.00	QC8 Machining-4		3C-1
175	Outsource	3 pcs		2/12/18	0.00	0.00	Outsource13		3C-1
180	Packaging	3 pcs		2/12/18	0.00	0.00	Packaging2		3C-1
190	QC	3 pcs		2/12/18	0.00	0.00	QC6		3C-1
200	Packaging	3 pcs		2/12/18	0.00	0.00	Packaging3-1		3C-1
210	QC21-SA	3 Ea		2/12/18	0.00	0.00	QC21		3C-1

Part Op 110 - Cut blanks to 5.545"

Descriptions: 120 - 1-Machine as per DWG. FB 849 FOLIO REV: _____ DWG REV: _____ 2-Broach 3-Deburr
4-Engrave T/N And / or S/N number as required Using Marktronic engraver as per DWG.
175 - Issue P/O to Groupe Altech: P/O 039640 -Zinc plate, ASTM B633 TYPE 1 SC2 -Certificate of Conformity is required

Job BOM

Part / Item	Component Name	Quantity	Operation	Container
MT-4140-B-0.750X1.750	4140 Steel Bar 0.750 X 1.750	1.4340 ft (.478 ea)	90-Start up Operation	5042 422

Job Allocations

Operation	Component Part	Required	Inventory	Allocated
90-Start up Operation	MT-4140-B-0.750X1.750	1	0	0

Dart Aerospace Ltd.
1270 Aberdeen Street
Hawkesbury, ON K6A 1K7
CANADA
TEL.: 1 613 632-5200
Email: sales@dartaero.com
www.dartaerospace.com

Part Specifications

Specifications could not be found.



Container No: S060921



Part: RBW6205G26631-3G-1

Job No: 171437

Serial No/Batch: S060921

Revision: 2

Inspector:

Plex 2/1/18 10:08 AM Dart.lajeunesse.marie

DQA: _____ Date: _____



WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed: _____ Date: _____

Work Order update only ☐

Work Order: _____ Part No. _____ NCR No. _____	DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐ Suspected Unapproved ☐	AGAINST DEPARTMENT/PROCESS Skid-tube ☐ Machining ☐ Thermoforming ☐ Large Fab ☐ Cross tube ☐ Small Fab ☐ Finishing ☐ Composite ☐ Water Jet ☐ Prod. Eng. Coord. ☐ Rec/Store/Packaging ☐ Supplier ☐ Engineering ☐ Quality ☐ Other ☐			
Date :	Step #:	QTY Effective :		MRB (QSI042) Approval	
Description Work Order Deviation		Disposition		Completed By	
				Lead hand / Supervisor Approval Verification	
				QC / QA Coordinator Approval	
Root Cause		FAULT CATEGORY			
Environment ☐ Design ☐ Doc/Data ☐ Equip/Tooling ☐ Handling/Pre ☐ Material ☐ Internal Transport ☐ Tribal Knowledge ☐ LOA ☐ Substation ☐ Past Expiry Date ☐ Misidentified ☐	No Re-verification ☐ Operator ☐ Offset/Setup ☐ Supplier ☐ Training ☐ Use for Testing ☐ Poor Information ☐ Rushing ☐ Product Improvement ☐ Process Improvement ☐ Manufacturing Process ☐ Past Due ☐	Pressure/Forced ☐ Bending ☐ Centre Not Concentric ☐ Cracks ☐ Crimp/Kink/Ripple/Wave ☐ Cuffs ☐ Crushing ☐ Heat Treat ☐ Wave/Twist in Tube ☐ Marks/Chatter ☐	Temperature/Cure ☐ Set-up ☐ BOM/Route ☐ Broken/Damage/Defect ☐ Inspection Incomplete/Unqualified ☐ Contamination ☐ Countersink ☐ Cut Too Short ☐ Instructions Incomplete/Unclear ☐ Drill Holes ☐	Power Loss/Surge ☐ Folio/Program ☐ Grain ☐ Weld ☐ Wrong Stock Pulled ☐ Out of Sequence ☐ Off-set ☐ Misabeled ☐ Fit/Function ☐ Misaligned/off center ☐	Positioned Wrong ☐ Outside Dimensions ☐ Over/Under tolerance ☐ Part Incorrect ☐ Part Lost/Missing ☐ Part Moved ☐ Drawing ☐ Finish ☐ Misread ☐ Turning Sequence ☐
OTHER :					

DART AEROSPACE LTD		Work Order:	171437
Description: Wrench		Part Number:	RBW620SG26631-36-1
Inspection Dwg: RBW620SG26631-36		Rev: 2	Page 1 of 1

INSPECTION SHEET

Drawing Dimension	Tolerance	Actual Dimension	Accept	Reject	Method of Inspection	Comments
3.94	± 0.010	3.939	✓		Caliper	JCL-08
3.34	± 0.010	3.340	✓			
Ø 1.18	± 0.010	1.180	✓			
0.08	± 0.010	0.080	✓			
0.03	± 0.010	0.038	✓			
3.15	± 0.010	3.150	✓			
Ø 1.53	± 0.010	1.530	✓			
Ø 1.260 B.C.	± 0.005	1.260	✓			
Ø 0.690	± 0.005	0.691	✓			
1.00.94	± 0.010	0.939	✓			
0.12	± 0.010	0.120	✓			
Ø 0.21 x 90°	± 0.010	0.210	✓			
Ø 0.1556	± 0.005	0.156	✓			
0.17	± 0.010	0.170	✓			
0.503 (Broch)	± 0.005	0.506				
4-40UNC	2B	OK	✓		Screw	
0.22	± 0.010	0.230	✓		Caliper	JCC-08
1.575	± 0.005	1.576	✓			
1.170	± 0.005	1.170	✓			
1.170	± 0.005	1.170	✓			
0.50	± 0.010	0.500	✓			
R0.06	± 0.010	0.062	✓		Rad. Gauge	
R0.09	± 0.010	0.090	✓			
0.632	± 0.010	0.632			Caliper	JCL-08

Measured by: J.C.L.	Checked by: B.P.	QC Inspector:
Date: 18-04-13	Date: 18-04-18	Date:

Engineering Approval: (If necessary)	Date:
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Rev	Date	Change	Revised by	Approved
A	14.07.31	New Issue	KJ	

DQA: _____ Date: _____



WORK ORDER NON-CONFORMANCE / UPDATE

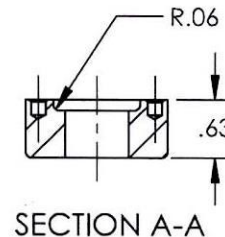
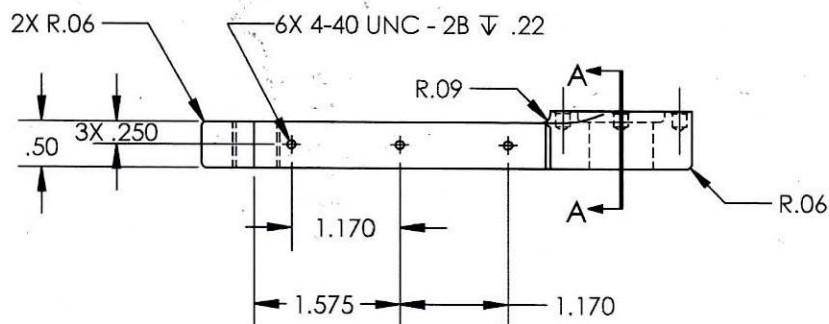
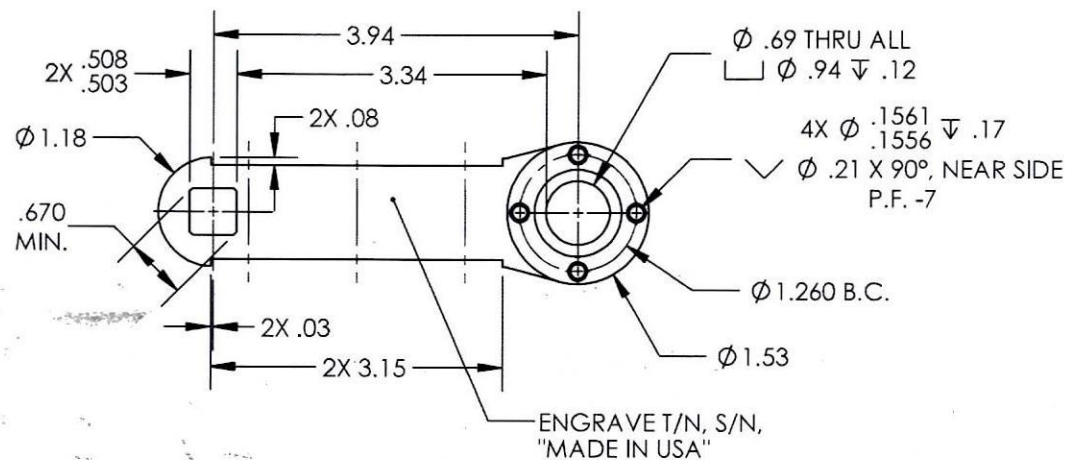
QA Closed: _____ Date: _____

Work Order update only ☐

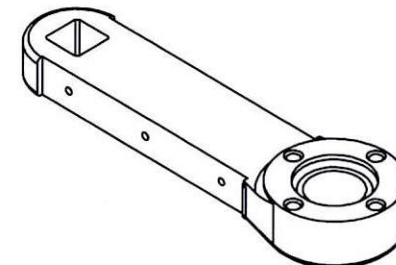
Work Order: _____ Part No. _____ NCR No. _____	DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐ Suspected Unapproved ☐	AGAINST DEPARTMENT/PROCESS Skid-tube ☐ Machining ☐ Thermoforming ☐ Large Fab ☐ Cross tube ☐ Small Fab ☐ Finishing ☐ Composite ☐ Water Jet ☐ Prod. Eng. Coord. ☐ Rec/Store/Packaging ☐ Supplier ☐ Engineering ☐ Quality ☐ Other ☐			
Date : _____	Step #: _____	QTY Effective : _____		MRB (QSI042) Approval	
Description Work Order Deviation			Disposition		
			Completed By		
			Lead hand / Supervisor Approval Verification		
			QC / QA Coordinator Approval		
Root Cause		FAULT CATEGORY			
Environment ☐ Design ☐ Doc/Data ☐ Equip/Tooling ☐ Handling/Pre ☐ Material ☐ Internal Transport ☐ Tribal Knowledge ☐ LOA ☐ Substation ☐ Past Expiry Date ☐ Misidentified ☐	No Re-verification ☐ Operator ☐ Offset/Setup ☐ Supplier ☐ Training ☐ Use for Testing ☐ Poor Information ☐ Rushing ☐ Product Improvement ☐ Process Improvement ☐ Manufacturing Process ☐ Past Due ☐	Pressure/Forced ☐ Bending ☐ Centre Not Concentric ☐ Cracks ☐ Crimp/Kink/Ripple/Wave ☐ Cuffs ☐ Crushing ☐ Heat Treat ☐ Wave/Twist in Tube ☐ Marks/Chatter ☐	Temperature/Cure ☐ Set-up ☐ BOM/Route ☐ Broken/Damage/Defect ☐ Inspection Incomplete/Unqualified ☐ Contamination ☐ Countersink ☐ Cut Too Short ☐ Instructions Incomplete/Unclear ☐ Drill Holes ☐	Power Loss/Surge ☐ Folio/Program ☐ Grain ☐ Weld ☐ Wrong Stock Pulled ☐ Out of Sequence ☐ Off-set ☐ Misabeled ☐ Fit/Function ☐ Misaligned/off center ☐	Positioned Wrong ☐ Outside Dimensions ☐ Over/Under tolerance ☐ Part Incorrect ☐ Part Lost/Missing ☐ Part Moved ☐ Drawing ☐ Finish ☐ Misread ☐ Turning Sequence ☐
OTHER : _____					

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REVISIONS					
REV	ECR	DESCRIPTION	DATE	INITIAL	APPROVED
2	16-0129	-1 DELETED DIM R.06.	8/29/2016	DEW	SM



(-1)
WRENCH



SHOP COPY
RETURN TO
ENGINEERING
UNCONTROLLED
SUBJECT TO AMEND
WITHOUT NOT
WORK ORD
NO. 171437 MLS
18-02-01

DART AEROSPACE	
TITLE WRENCH, SPECIAL NUT REMOVAL/INSTALLATION	
DWG NO. RBW6205G26631-3G-1	REV 2
MAT'L 4140/4142	UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES
HEAT RC 28-32	.XXX ± .005 FRACTIONS ± 1/8
FINISH ZINC PLATE	.XX ± .01 ANGLES ± 5°
SPEC ASTM B633 TYPE I SC 2	.X ± .1 SURFACES = 125
DRAWN BY: CLOUGH	1. BREAK ALL SHARP EDGES .015 x 45° OR .015R
CHECKED: DUERFELDT	2. DIMENSIONAL LIMITS APPLY AFTER PLATING
OPPS APPR: ANDERSON	3. INTERPRET DIM AND TOL PER ASME Y14.5M-2009
QA APPR: LINDSAY	USED ON MODEL
APPROVED: GILBERT	AW139
SCALE 1:2	DATE 3/12/2015
SHEET 2 OF 3	

DQA: _____ Date: _____

WORK ORDER NON-CONFORMANCE / UPDATE



QA Closed: _____ Date: _____

Work Order update only ☐

Work Order: _____ Part No. _____ NCR No. _____	DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐ Suspected Unapproved ☐	AGAINST DEPARTMENT/PROCESS Skid-tube ☐ Machining ☐ Thermoforming ☐ Large Fab ☐ Cross tube ☐ Small Fab ☐ Finishing ☐ Composite ☐ Water Jet ☐ Prod. Eng. Coord. ☐ Rec/Store/Packaging ☐ Supplier ☐ Engineering ☐ Quality ☐ Other ☐			
Date :	Step #:	QTY Effective :		MRB (QSI042) Approval	
Description Work Order Deviation			Disposition		
PHOTO TAKEN WITH FLUOR LIGHT ON 10/10/2019 10:00 AM			Completed By		
			Lead hand / Supervisor Approval Verification		
			QC / QA Coordinator Approval		
Root Cause Environment ☐ Design ☐ Doc/Data ☐ Equip/Tooling ☐ Handling/Pre ☐ Material ☐ Internal Transport ☐ Tribal Knowledge ☐ LOA ☐ Substation ☐ Past Expiry Date ☐ Misidentified ☐ No Re-verification ☐ Operator ☐ Offset/Setup ☐ Supplier ☐ Training ☐ Use for Testing ☐ Poor Information ☐ Rushing ☐ Product Improvement ☐ Process Improvement ☐ Manufacturing Process ☐ Past Due ☐			FAULT CATEGORY Pressure/Forced ☐ Bending ☐ Centre Not Concentric ☐ Cracks ☐ Crimp/Kink/Ripple/Wave ☐ Cuffs ☐ Crushing ☐ Heat Treat ☐ Wave/Twist in Tube ☐ Marks/Chatter ☐ Temperature/Cure ☐ Set-up ☐ BOM/Route ☐ Broken/Damage/Defect ☐ Inspection Incomplete/Unqualified ☐ Contamination ☐ Countersink ☐ Cut Too Short ☐ Instructions Incomplete/Unclear ☐ Drill Holes ☐ Power Loss/Surge ☐ Folio/Program ☐ Grain ☐ Weld ☐ Wrong Stock Pulled ☐ Out of Sequence ☐ Off-set ☐ Mislabelled ☐ Fit/Function ☐ Misaligned/off center ☐ Positioned Wrong ☐ Outside Dimensions ☐ Over/Under tolerance ☐ Part Incorrect ☐ Part Lost/Missing ☐ Part Moved ☐ Drawing ☐ Finish ☐ Misread ☐ Turning Sequence ☐		
OTHER :					



Dart Aerospace Ltd.
1270 Aberdeen St
Hawkesbury, ON
K6A 1K7
Canada

Tel (613) 632-5200

PURCHASE ORDER **PO039640**

Supplier: GRO002-VC
Group Altech
2455 Halpern
St Laurent
QC
H4S 1N9 Canada
Phone: 514-335-3666
Fax: 514-335-3868

PO No: PO039640
PO Date: 4/18/18
Due Date: 4/26/18
Purchase Order Revision:
Revision Date:
Ship-To Contact: Tsimiklis, ChrisoulaPhone:

Ship To: 1270 Aberdeen Street
Hawkesbury
ON
K6A 1K7 Canada
Phone: 613-632-5200

Via: Ground
Pymt Terms: Net 30
Freight Terms:
Special Comments:

Items

Line Item	Job	Part	Description	Status	Due Date	Order Quantity	Received Quantity	Balance	Unit Price (CAD)	Extended Price
1	171437	RBW6205G26631-3G-1	Wrench -Issue P/O to Groupe Altech: P/O _____ -Zinc plate, ASTM B633 TYPE 1 SC2 -Certificate of Conformity is required	Firmed	4/26/18	12 pcs	0 pcs <i>12x</i>	12 pcs	\$7.50/pcs <i>At 12/04/20</i>	\$90.00
2	176144	RB T101649-101	Brake Disc Holding Tool -Issue P/O to GROUPE ALTECH; PO _____ -Black oxide finish, MIL-C-13924C Class 1 -Apply thin layer of oil/CPC per MIL-PRF-16173 Grade 3 Class 1 or MIL-c-81309 Type III Or MILL-C23411A or MIL-PRF-81309 and wipe off excess. -Certificate of Conformity is required	Firmed	4/26/18	3 pcs	0 pcs	3 pcs	\$40.00/pcs	\$120.00
Grand Total:										\$210.00

Order Notes

CT.



Certificat de Conformité / Certificate of Compliance

(008563-1)

2455, Rue Halpern | Saint-Laurent | Québec | H4S 1N9
 Tel: 514-335-3666 Fax: 514-335-3868
 www.groupaltech.com

Bon de Livraison / Packing Slip

008563 - 1

Livré à / Ship to

DART AEROSPACE LTD
 1270 ABERDEEN STREET
 HAWKESBURY, ON, K6A1K7
 CANADA
 Tel.: 613-632-5200 Fax.:

Client / Customer:

DART AEROSPACE LTD
 1270 ABERDEEN STREET
 HAWKESBURY, ON, K6A1K7
 CANADA
 BUYER:

Date expédition Ship date		Créé Par Generated By	Transport / No de Compte Courier / Acc. No.	Bon de commande Client Customer Purchase Order No.				
19-Apr-2018		Aman		039640				
#Ligne Line#	No. de Série / # Pièce Part Number / Line Item Details Job # / Ref #	Description pièce(s)	CATG. U/M	Comm. /Ordered	Exp/ Shipped	Qté NC/ NC Qty	Qté Scrap/	À venir/ Back Order
1	RBW6205G26631-3G-1 Rev.	RBW6205G26631-3G-1 01-ZINC-CLEAR TRI [ZINC CLEAR TRIVALENT] ASTM B633 TYPE 1 SC2 0.0003	ZINC CH	12	12	0	0	0

Notes Additionnelles / Additional Notes

Épaisseur réelle
Actual Thickness

Inspecteur Qualité
Quality Inspector

Réçu par
Received By

Nous certifions que les pièces énumérées ci-dessus ont été traitées en conformité avec votre commande et vos spécifications et rencontrent les exigences.
 Notre responsabilité financière et légale ne sera pas supérieure au montant de la facture issue.

We hereby certify that the parts listed above have been process in accordance with your purchase order and specifications and are in conformance with your requirements.
 Our financial and legal responsibility will not be higher than the amount of invoice.